IT Essentials/Cyber Security

Cisco Academy

Grades 9-12   2– semester

HS-Technology, Practical Skills or

General Elective PREREQUISITE-None

UC/CSU "G" Course Approved

Learn about the responsibilities of an IT professional. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a networked environment. Expanded topics include the Microsoft Windows 7 operating system, security, networking, and troubleshooting. Hands-on lab activities are an essential element of the course. The Virtual Laptop and Virtual Desktop are standalone tools designed to supplement classroom learning and provide an interactive "hands-on" experience in learning environments with limited physical equipment. Second Semester will focus on cyber security which covers the importance of cyber security, the most common risks, and how to mitigate them. Learn what cyber security is and how the industry is growing. Understand how attackers use malware and how to protect individuals from attack.

Web Design

Semester Course

Grade 9-12   1– semester

HS-Technology, Practical Skills or

General Elective PREREQUISITE-None

UC/CSU "G" Course Approved

This course is designed to develop competency in the use of the Internet, including critical comparison of web sites, web site development, connectivity, and the use of multimedia programs including Adobe Dreamweaver©, Photoshop and Flash. Students research, design and build their own 5 page live websites. Students create websites using text, images, sound and video files. Students master copyright, fair-use and creative control issues. A detailed understanding of website development from idea to deployment is an integral part of the course.

AP Computer SciencePrinciples

Grade 10-12   2– semester

PREREQUISTE– A grade of "A" in Intro to

Programming, OR a "B" or higher in Algebra

II, OR permission from instructor.

UC/CSU "G" Approved

AP Computer Science Principles introduces you to the foundations of computer science with a focus on how computing powers the world. Along with the fundamentals of computing, you will learn to analyze data, create technology that has a practical impact, and gain a broader understanding of how computer science impacts people and society. The AP CSP course is organized around seven BIG ideas, which are essential to studying computer science:
    I: Computing is a creative activity.
    II: Abstraction reduces information and detail to facilitate focus on relevant concepts.
    III: Data and information facilitate the creation of knowledge.
    IV: Algorithms are used to develop and express solutions to computational problems.
    V: Programming enables problem solving, human expression, and creation of knowledge.
    VI: The Internet encompasses modern computing.
    VII: Computing has global impacts.

Introduction to Programming

Semester Course Grade 9-12

HS-Technology, Practical Skills or

General Elective PREREQUISTE– None

Students learn the principles, practice and strategies of computer programming. Programming is the art of explaining to a computer what you want it to do, in exact detail and in a language that the computer can understand. It requires logical thinking, problem solving, clear expression and is often frustrating. An interactive introductory course for students brand new to programming that teaches the foundations of computer science using the Python language. Not only will this semester course prepare students for AP Computer Science Principles, but it will teach students how to think computationally and solve complex problems, skills that are important for every student. Programming is developed through Alice 3.3 an interactive programming language developed by Carnegie-Mellon University.

Office Software and Systems
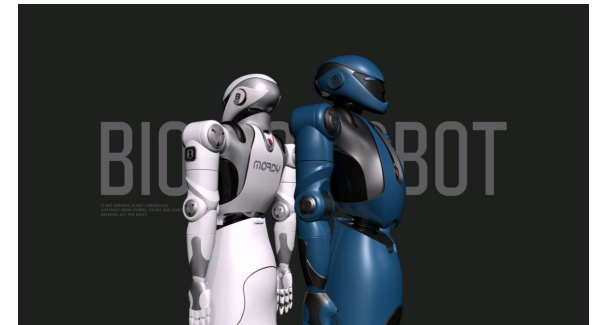
Semester Course Grade 9-12

HS-Technology, Practical Skills or

General Elective PREREQUISTE– None
COLLEGE CREDITS – up to 4.5
UC/CSU "G" Course Pending

The class includes a survey of computer hardware, the history of computing, computer security and detailed investigations of Windows, Microsoft Word, Excel, PowerPoint, and Internet Explorer. Students focus on the Microsoft Office 2019 Suite with the goal of qualification for taking the Microsoft Office Specialist Exam. A Microsoft Office Specialist (MOS) certification helps validate proficiency in using Microsoft Office 2019 and meets the demand for the most up-to-date skills on the latest Microsoft technologies. Candidates who pass a certification exam show that they can meet globally recognized performance standards.

Robotics

Semester Course

Grade 9-12

HS-Technology, Practical Skills or

General Elective PREREQUISITE-None

UC/CSU "G" Course Pending

Autodesk's VEX Robotics Curriculum is divided up into twelve primary units and one optional unit. In a flexible format, students learn about engineering and engineering problem solving. They will be given introductions to the VEX Robotics Design System and Autodesk® Inventor® while learning key STEM principles through a process that captures the excitement and engagement of robotics competition. The curriculum is heavily focused on mechatronic principles; as such, programming is NOT required.